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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/626,165	07/24/2003	Christopher Cave	I-2-0369.1US	9718

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EXAMINER	
LAM, DUNG LE	

ART UNIT	PAPER NUMBER
2617	

NOTIFICATION DATE	DELIVERY MODE
10/08/2010	ELECTRONIC

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

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Office Action Summary	Application No.	Applicant(s)	
	10/626,165	CAVE ET AL.	
	Examiner	Art Unit	
	DUNG LAM	2617	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *18 June 2009*.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *57-88* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *57-88* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date ___.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

Claims **57-62, 64-69, 71-84, 86-88** rejected under 35 U.S.C. 103(a) as being unpatentable **Crichton** (US Patent No. 6330459).in view of **Gray** (US Patent No. 6108323).

Regarding **claim 71**, **Crichton** teaches a base station comprising:

- the base station configured to detect sounding pulses from wireless transmit/receive units (WTRUs) on a frequency that is in close proximity to uplink and downlink frequencies and is different from the uplink and downlink frequencies (RACH, access request message uses a frequency specific to the RACH channel which is close to but different from the uplink and downlink frequency for traffic channel TCH; C5L35-65);
- the base station configured to communicate information related to a detected sounding pulse from a WTRU to an interface (BS receives the RACH C35 to L45

and OMC instructs BS to send a directional beam based on recorded signal strength received from BS, C5 L35-C6 L5);

- the base station configured to receive from the interface a notification to establish a wireless communication with the WTRU (OMC instructs BS that records the best signal strength from the RACH to respond C5 L55- C6L3) and
- the base station configured to begin a wireless communication with the WTRU in response to a notification to establish a wireless communication with the WTRU (C6 L3-16).
- selectively operating the beamforming antenna (Fig. 3 and 4, Abstract) and the base station configured to receive from the interface a relative location of the WTRU and selectively operating the beamforming antenna to direct a common channel toward the relative location of the WTRU (BS receives from interface "OMC" to respond with narrow beam toward the direction of the communicating unit, C5 L55- C6 L5, C6 L25-55, C8 L40-60).
- Crichton teaches the sound pulse access request message as a wide-area RACH which implies that it is omnidirectional. Though he does not explicitly state that it is omnidirectional. In an analogous art, **Gray** teaches an access request message as omnidirectional (L62-65). Therefore, it would have been obvious for one of ordinary skill in the art at the time of the invention to combine Crichton's teaching of establishing a communication with Gray's teaching of an omnidirectional signal to increase the range and directions that the message can be received by surrounding base stations.

Regarding **claims 57, 64, 76 and 82** they are methods and apparatus claims that have the same corresponding limitations as claim and thus are rejected for the same reasons as claim 71.

Regarding **claims 58, 65, 72 and 77**, **Crichton and Gray** teach the method of claim 57 wherein the communicated information related to the detected omnidirectional sounding pulse includes information to facilitate determining the relative location of the WTRU (C5 L55-65).

Regarding **claim 59**, **66, 73, 78, and 83**, **Crichton and Gray** teach the method of claim 58 wherein the communicated information related to the detected omnidirectional sounding pulse includes signal strength information (Crichton C6 L1-10,), where the signal strength information indicates that the received signal strength crossed a threshold.

Regarding **claim 60**, **67, 74, 79, and 84**, **Crichton and Gray** teach the method of claim 57 wherein the communicated information related to the detected omnidirectional sounding pulse includes geolocation information (Crichton C5 L55- C6 L5, C6 L25-55, C8 L40-60).

Regarding **claim 61, 68, 75 and 80**, **Crichton and Gray** teach the method of claim 57 further comprising transmitting a cyclic sweeping beacon channel (Crichton C5 L55-C6 L5, C6 L25-55, C8 L40-60).

Regarding **claim 62**, **69 and 81**, **Crichton and Gray** teach the method of claim 57 wherein detecting the omnidirectional sounding pulse includes detecting at least one of a plurality of omnidirectional sounding pulses (Crichton C5 L35-65).

Regarding **claim 86**, **Crichton and Gray** teach the WTRU of claim 82 except wherein the antenna is an isotropic antenna configured to transmit equally in all directions. However, the examiner takes official notice that the use of isotropic antenna is well known in the art. Therefore it would have been obvious for one of ordinary skill in the art at the time of the invention to combine Crichton and Gray's teaching with the isotropic antenna to communicate signals from all directions.

Regarding **claim 87**, **Crichton and Gray** teach the WTRU of claim 82 wherein the antenna is a selectively operable beamforming antenna configured to transmit directional beams and omnidirection sounding pulses comprising a plurality of directional sounding pulses (**Crichton** C5 L55- C6 L5, C6 L25-55, C8 L40-60).

Claim **85** rejected under 35 U.S.C. 103(a) as being unpatentable by **Crichton and Gray** in view of **Velazquez et al. (US Patent No. 6,593,880).**

Regarding **claim 85**, **Crichton and Gray** teach the WTRU of claim 82 but is silent that the mobile unit is equipped with a global positioning system (GPS) and the transmitting of an omnidirectional sounding pulse includes transmitting of mobile unit location information associated with the sounding pulse transmitted by the mobile unit and/or includes transmitting of identification information associated with the sounding pulse transmitted the mobile unit. In an analogous art, **Velazquez** teaches that the UE has a GPS (C8 L20-37). Therefore it would have been obvious for one of ordinary skill in the art at the time of the invention for to add Valazquez's GPS to Watanabe and

Jollota's handoff method to speed up the location positioning of the handset and thus to promote a faster handoff process.

Claims 63, 70 and 88 are rejected under 35 U.S.C. 103(a) as being unpatentable over **Crichton and Gray** in view of **Anderson et al.** (US Patent No. 5396541).

Regarding **claim 63 and 70**, **Crichton and Gray** teach the method of claim 62 wherein the plurality of omnidirectional sounding pulses includes a first pulse having a first signal strength and a second pulse having a second signal strength, where the second signal strength is greater than the first signal strength. However, Anderson teaches a method of adjusting the power to a higher or lower level if the mobile is far or close from the base stations respectively (Col. 9, lines 50-15). In addition, it is also well known in the field of communications that after a failed transmission, one of ordinary skill in the art may use back-off algorithm to resend the signal in a predefined period of time. Therefore, it would have been obvious for one of ordinary skill in the art at the time of the invention to combine **Crichton and Gray**'s handoff method and **Anderson**'s teaching of a increasing the signal power (if the mobile is far away from the base station) at a predefined period to increase the chance of a successful handoff.

Regarding **claim 88**, **Crichton and Gray** teach the WTRU of claim 82 except the antenna is configured to transmit a series of omnidirectional sounding pulses to establish a new wireless. However, Anderson teaches a method of adjusting the power to a higher or lower level if the mobile is far or close from the base stations respectively

(Col. 9, lines 50-15). In addition, it is also well known in the field of communications that after a failed transmission, one of ordinary skill in the art may use back-off algorithm to resend the signal in a predefined period of time. Therefore, it would have been obvious for one of ordinary skill in the art at the time of the invention to combine Watanabe and Jollota's handoff method and Anderson's teaching of a increasing the signal power (if the mobile is far away from the base station) at a predefined period to increase the chance of a successful handoff.

Response to Arguments

Applicant's arguments with respect to claims 57-88 have been considered but are moot in view of the new ground(s) of rejection.

Conclusion

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to DUNG LAM whose telephone number is (571) 272-6497. The examiner can normally be reached on M - F 9 - 5:30 pm, Every Other Friday Off.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Paul Harper can be reached on (571) 272-7605. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/VINCENT P. HARPER/
Supervisory Patent Examiner, Art Unit 2617